

THE BENHS CONSERVATION WORKING GROUP PRIORITY SPECIES LISTS: MACRO-MOTHS AND DIPTERA

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The Society's Conservation Working Group (CWG) was founded in 1994 and is undertaking a number of initiatives with the aim of bringing the expertise of members to bear on matters relating to the conservation of the UK invertebrate fauna. It is hoped that a summary of progress so far and current activities will be published in this *Journal* in due course (Miles and Dobson, *in prep.*).

At the meeting of the CWG held in September 1996, it was proposed that the group initiate the development and publication of short lists of species from a range of invertebrate taxa, with the aim of expressing the field naturalists' views of which species deserve special attention, and where the Society can contribute in some way to their conservation. The rationale and the criteria for inclusion in these lists are discussed in this article, along with the publication of preliminary lists of Macro-moths and Diptera.

It was decided that no attempt should be made to select species on the basis of objective criteria. Not only does the BENHS lack the data or resources to do so, but these lists are not intended to be analogous to Red Data Book (RDB) or Biodiversity Action Plan (BAP) lists. Instead it is hoped that the expression of field naturalists' views through these lists will provide a focus for discussion and action on conservation problems.

A key characteristic of the lists is that they will be regularly updated in response to comments and suggestions by members, and in response to changing circumstances. It is intended that, due to the 'dynamic' nature of these lists, they will continue to reflect current issues and areas of concern.

PURPOSES OF THE LISTS

- In the first place, these lists prioritize a range of species where the expertise of members can contribute to our understanding of their status, distribution, life-histories and habitat requirements.

Society and recording scheme members are encouraged to submit their biological observations, records and other comments relating to the conservation of these species to the CWG. We would like to compile the fullest possible picture of these species, their habitats, behaviour and conservation status, and no detail that members can supply is too small to be of interest in this stage. All requests for confidentiality will naturally be honoured.

The CWG will compile and assess data on the status, distribution and autecology of the priority species. In appropriate cases this will lead to the development of strategies for their conservation, e.g. recommendations for habitat management.

Progress reports will appear periodically in the pages of this *Journal*.

Additional uses of the Priority Species Lists will be:

- To serve as an expression of the field naturalists' views as to which species are deserving of special attention.
- To reflect and highlight current issues and areas of concern to members.
- To prioritize species for any kind of project, research or action plan carried out by, or in conjunction with the BENHS/CWG.
- To raise the profile of selected species of invertebrate, particularly those in taxa not specifically dealt with by other organizations.
- To provide a resource to be called upon when the Society's views and input are elicited by other organizations (e.g. the Quinquennial Review of schedules 5 and 8 of the Wildlife and Countryside Act, 1981).
- To stimulate both debate among BENHS and recording scheme members, regarding the status of the selected species, and appropriate conservation measures.

CRITERIA FOR INCLUSION

In order to reflect properly the views of field naturalists, the criteria for inclusion are broadly drafted so as to allow inclusion of a species on the basis of partially subjective views of its status. These criteria can be summarized as:

A species whose status in the UK is viewed with some concern by field naturalists, and where targeting or research by BENHS members might reasonably be expected to contribute in some way to its conservation.

Examples of particular criteria include:

- Species where a paucity of recent records raises the possibility, in the view of field naturalists, that the species may be in decline, regionally or nationally.
- Species, whether rare or not, which are thought by field naturalists to be in steep decline due to loss of habitat or other causes.
- Species subject to co-operative projects between the BENHS and other bodies.
- Species whose actual status, in the opinion of field naturalists, is markedly at variance with the status of the species as reflected in recent literature, or with its RDB status, if any.
- Those species which the CWG wants particularly to promote, e.g. to raise the profile of the species, or in the context of targeted field work, etc.
- Species chosen as representatives of a particular habitat, where the value of the habitat for invertebrates is the subject of study by the BENHS, or where the habitat itself appears to be under threat.
- Scarce species where sufficient expertise exists amongst BENHS members to form the basis of meaningful proposals for the species' conservation.
- (The converse of paragraph g.) Scarce species where little is known of their biology and habitat requirements, and where it is thought that field work and other research by the CWG and its correspondents can make a contribution to our understanding of it, and thus its conservation.

The adoption of pragmatic criteria for the Priority Species Lists enables the inclusion of a species on the basis of its own 'individualized' criteria. A disadvantage of this approach is that the reasons for inclusion of any particular species might not be self-evident. In view of this it is essential that each species on the lists is accompanied by a short statement setting out the reasons for its inclusion.

COMPILATION AND DEVELOPMENT OF THE PRIORITY SPECIES LISTS

Additional considerations relating to the compilation of the lists include:

- The lists will be dynamic not static, and will be regularly updated in response to new information and suggestions from members and from other quarters.
- The lists should not be too long as each species included has a practical implication. This may range from the relatively passive e.g. a 'watching brief' to an active practical commitment, e.g. a targeted field meeting.
- The lists will not be ranked. To attempt this would be difficult, contentious and without foundation. Taxonomic order is recommended.
- The lists should be compiled independently of existing lists. For example, there is no reason why all species should be RDB 1–3, and non-RDB species should be included where they fulfil the adopted criteria. Similarly, although there may be good reasons to include certain BAP species, the Priority Species Lists are not in any way tied to the BAP. Field naturalists' views are paramount, and the CWG lists operate on a far broader front, accepting a wide range of criteria for inclusion.
- In order to avoid possible duplication of effort, it will often be desirable to consult with other organizations prior to publication of these lists.

CWG PRIORITY SPECIES LISTS

Abbreviations. RDB: Red Data Book. N (a/b): Notable. [Provisional RDB statuses are according to Waring (in press) (Macro-moths), which are included here with the kind permission of the author: and according to Falk (1991) (Diptera). B&F No.; Bradley and Fletcher check list reference number.] BAP: Biodiversity Action Plan. S, M and L: Short, Middle and Long lists.

NB 'Middle List' refers to the revision dated 25 July 1997. It appears that the 'Long' list may have been shelved indefinitely, and in any case requires substantial revision. BAP L designations should therefore be regarded as nominal at present.

MACRO-MOTHS [Version 1, Spring 1998]

Species	B&F No.	Status	Reason/s for inclusion
<i>Adscita globulariae</i> (Hüb.) scarce forester (Zygaenidae)	0165	Na, BAP L	A local species, some evidence of decline
<i>Aplasta ononaria</i> (Fuess.) rest harrow (Geometridae)	1664	RDB3, BAP L	Currently only known from a few sites in Kent. Biology insufficiently known
<i>Scopula emutaria</i> (Hüb.) rosy wave (Geometridae)	1691	Nb	A local species, status requires investigation
<i>Trichopteryx polycommata</i> (D.&S.) barred tooth-striped (Geometridae)	1880	Na, BAP M	No recent records from a number of previous sites in S. England
<i>Spilosoma urticae</i> (Esp.) water ermine (Arctiidae)	2062	Nb, BAP L	Scattered records only; status requires investigation
<i>Meganola strigula</i> (D.&S.) small black arches (Nolidae)	2075	Na, BAP L	Confined to oak woods in S. England; some evidence of decline

Species	B&F No.	Status	Reason/s for inclusion
<i>Spaerlotis ravida</i> (D.&S.) stout dart (Noctuidae)	2113	Local	Variable in abundance but some evidence of decline. Life-history poorly understood
<i>Mythimna turca</i> (L.) double line (Noctuidae)	2191	Nb, BAP M	Scattered records; some evidence of its disappearance from certain sites
<i>Jodia croceago</i> (D.&S.) orange upperwing (Noctuidae)	2257	RDB1, BAP M	Virtually no recent confirmed records
<i>Oria musculosa</i> (Hübner.) Brighton wainscot (Noctuidae)	2378	Na, BAP M	Some evidence of decline; possibly due to changes in agricultural practices?
<i>Panemeria tenebrata</i> (Scop.) small yellow underwing (Noctuidae)	2397	Local	Scattered records; status requires investigation
<i>Heliiothis maritima warneckeii</i> (Bours.) shoulder-striped clover (Noctuidae)	2402	RDB3, BAP L	Known from only very few sites; some evidence of decline; few recent records
<i>Trisateles emortualis</i> (D.&S.) olive crescent (Noctuidae)	2495	RDB3, BAP M	Possibly confined to a few sites in SE England; current status uncertain

DIPTERA [Version 1, Spring 1998]

Species	Status
<i>Bombylius minor</i> L. (Bombyliidae) (A bee-fly)	RDB2, BAP M
<i>Thyridanthrax fenestratus</i> (Fallén) (Bombyliidae) (A bee-fly)	RDB3, BAP M
<i>Chrysotoxum octomaculatum</i> Curtis (Syrphidae) (A hoverfly)	RDB2, BAP S

Reasons for inclusion

- A trio of scarce and very local species confined to certain areas of lowland heath in southern England, primarily Dorset, the New Forest and Surrey (unconfirmed older records of *B. minor* from Wales and the Isle of Man (Drake, 1991)).
- There is considerable scope for increasing our knowledge of the biology and habitat requirements of these species through field observations. Both the bee-flies may occur with some predictability at certain sites, and *T. fenestratus* can be readily identified in the field.
- Their habitats may be threatened both through neglect and through inappropriate management.
- Considering the known or probable association of each of these species with aculeate hymenoptera, hymenopterists may also take an interest in these species.

Note These three species are included in this preliminary list pending (in part) decisions as to the extent (if any) of formal involvement by the BENHS in implementing the BAP. The list will be updated when these matters are

clarified. It is hoped that in the mean-time, dipterists will submit additional suggestions.

CONCLUDING REMARKS

The preliminary lists of Macro-moths and Diptera presented above have been compiled by members of the CWG in consultation with a number of specialists. As a first attempt it is naturally hoped that the choices of included species are at least considered rational by BENHS members. On the other hand there seems to be no reason to avoid controversial choices in this context, and it is hoped that members with views as to the current and possible future inclusions will communicate their ideas and suggestions to us. These lists are intended to be dynamic reflections of current issues, not definitive statements of species status. As such it is hoped that debate among members as to suitable inclusions will focus attention on current issues, and that these issues will be reflected in new versions of the lists as they are published.

No formal procedure for updating the lists is required at this stage, although one may be introduced later if necessary. Lists will be reviewed regularly by the CWG in the light of comments and suggestions from correspondents, progress with existing Priority Species and information from other sources.

In addition to inviting comment on the current lists, we are now actively seeking to extend the range of invertebrate groups represented on these lists. In view of this we are seeking members who would be willing to compile, or assist in the compilation of preliminary lists covering other taxa. Please contact J. R. Dobson in the first instance if you feel you might be able to contribute in this respect. We also want suggestions for individual species belonging to any group of invertebrates. All suggestions should be accompanied by a brief statement giving the reason(s) that the species should be included, bearing in mind the criteria discussed in this article.

Please address correspondence on Macro-moths to J. W. Phillips, and all other correspondence to J. R. Dobson.

REFERENCES

- Drake, C. M. 1991. *Provisional Atlas of the Larger Brachycera (Diptera) of Britain and Ireland*. Biological Records Centre, Huntingdon.
- Falk, S. J. 1991. *A review of the scarce and threatened flies of the British Isles (Part 1)*. Nature Conservancy Council, Peterborough.
- Miles, S. R. and Dobson, J. R. (in prep.). The BENHS Conservation Working Group: 1994–1998.
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